

What's Your Solution to Pollution?

Purpose

Students will gather data to research the environmental issues of air pollution, air quality, and ozone. Students will also construct maps that show the areas most affected by this issue, and examine the ways to solve this problem.

Materials

For the teacher: chalk, chalkboard, IDEM Ozone Information Brochure

For the students: access to the Internet, pencil, copy of Black Line Master (BLM) *What's Your Solution to Pollution?*, copy of BLM *United States of America*

Activity

A. Pre-Activity Preparation

1. Reproduce the BLM *United States of America* and BLM *What's Your Solution to Pollution?* so that each student has a copy.
2. Bookmark the following site for the students:
<http://www.airnow.gov/>
3. Research ozone and air quality by reading IDEM's Ozone Information Brochure at:
http://www.state.in.us/idem/files/Ozone_Information_Brochure.pdf

B. Pre-Activity Discussion

1. Brainstorm types of pollution with the class and list them on the chalkboard.
2. Share with the students that all types of pollution are serious problems; however, they are going to focus on air pollution today.
3. Discuss what ozone is and why it is harmful to humans and the environment.
4. Discuss air quality index (AQI).

C. Description of Activity

1. Divide the students into groups of two or three.
2. Explain to the students that they will be working together to complete the BLM *What's Your Solution to Pollution?* using the AIRNow Web site.
3. Also direct the students to color in the *United States* map to match the map on the main page of the AIRNow Web site.

Technology Literacy Standards

	I	II	III	IV	V	VI	VII
1	X		X	X		X	X
2	X	X	X				
3	X	X		X		X	X
4		X				X	
5				X			
6		X				X	
7							
8						X	
9						X	
10							
11							
12						X	
13				X			
14							
15				X			
16							

☒ = This Technology Literacy Standard is addressed in this lesson.

☐ = This Technology Literacy Standard is not addressed in this lesson.

D. Close the Activity

1. Discuss what the students learned about air quality.
2. Ask: What is Indiana's air quality like? Why do you think the differences exist between the areas that are in green (good air quality) and the areas in yellow, orange, or red (moderate to unhealthy air quality)?
3. Discuss the "What You Can Do" ideas that they wrote on their BLMs.

Classroom Assessment _____

Collect the students' BLMs and United States maps.

United States of America

Name: _____

Directions: Color in the United States map to match the map on the main page of the AIRNow Web site (<http://www.airnow.gov>).



Name _____

What's Your Solution to Pollution?



Using <http://www.airnow.gov>, answer the questions below:

What 3 cities have the highest AQI (air quality index) forecast today?

Click on the AQI logo below the map of the United States to complete the chart:

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
0-50		Green
	Moderate	
	Unhealthy for sensitive groups	Orange
151-200		
		Purple
	Hazardous	

Click on the “What You Can Do” link and fill in 2 ideas under each section.

Transportation Tips: _____

Household Tips: _____

Action Day Tips: _____

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Teacher Directions

Share with students an overview of the information you have researched. Pass out the BLM *What's Your Solution to Pollution?* Direct students to the <http://www.airnow.gov> website in order to complete the BLM.

Pass out the United States map. Direct students to color in the map to match the map on the mail page of the <http://www.airnow.gov> website.

Answer Key

What 3 cities have the highest AQI (air quality index) forecast today?

Answers will vary according to the data available on the Web site that day.

Click on the AQI logo below the map of the United States to complete the chart:

Air Quality Index	Levels of Health Con-	Colors
<i>When the AQI is in this range:</i>	<i>...air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

Click on the “What You Can Do” link and fill in 2 ideas under each section.

Answers will vary but they should reflect accurate information acquired from the <http://www.airnow.gov> website.